Home assignment

1. The density of alcohol is 600 kg/m-3. Express it in g cm-3.

⇒ Density of ~~ethe~~ alcohol is = 600 kg/m^-3 in g/cm^-3 = 6001000 = 0.60 g/cm^3

2. A piece of wood of mass 150 g has a volume of 200 cm^3. Find the density of wood in (a) C.G.S unit, (b) S.I. unit.

⇒ Mass of wood (M) = 150 g

Volume of wood (V) = 200 cm^3

Density (D) = ?

$D = \frac{M}{V} = \frac{150}{200} = 0.75 \frac{g}{cm^3}$

In S.I, System = 0.75 x 1000

= 750 kg/m^3

3. Mass of solid (M) = 72 g

Initial volume of water V_1 = 24 ml

final volume of water V_1 = 42 ml

Volume of solid (V) = $V_2 - V_1$ = 42 - 24 = 18 cm^2

Density of solid (D) = ?

$$D = \frac{M}{V} = \frac{72}{18} = 4.0\ g\ cm^{-3}$$

4. Most of the liquid increase in volume with an increase in tempreture, but water shows anomalous behaviour - water has a maximum volume at 4°c and maximum density at 4°c. Actually ; when volume ~~doe~~ increases density decreases

5. Density bottle is a small glass bottle which has a glass stopper at its neck.

1. Measure the volume and mass of a liquid, and calculated D=m/v